Material Safety Data Sheet

Revision Issued: 05/07/2014	Supercedes: 04/07/2011	First Issued: 1/1/2000

Section I – Product and Company Identification

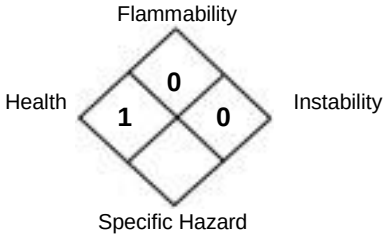
Product Name: **Potash**

PotashCorp MSDS No.: 1
ERG No.: N/A

1101 Skokie Blvd., Northbrook, IL 60062
Phone (800) 241-6908 / (847) 849-4200

Suite 500, 122 – 1st Avenue South
Saskatoon, Saskatchewan Canada S7K7G3
Phone (800) 667-0403 from Canada
(800) 667-3930 from USA

Emergencies (800) 424-9300 (CHEMTREC)
Web Site www.potashcorp.com
Health Emergencies, Contact Your Local Poison Center



NFPA Code

Common Name: Potash	Formula: KCl	Synonym: Muriate of Potash: Granular, Lawn & Garden, Standard & Suspension Grades	Uses: Fertilizer

Section II – Composition / Information On Ingredients

Chemical Name	CAS No.	Exposure Limits								% by Weight
		OSHA PEL		TLV – TWA		STEL		CEIL		
		mg/m^3	ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3	ppm	
Potassium Chloride	7447-40-7			10*						95-99.8
Sodium Chloride	7647-14-5			10*						0.1-4

May contain up to 0.25% base lubrication (de-dust) oil and/or 0.03% neutralized primary aliphatic (anti-cake) amine.
* Based on ACGIH nuisance dust limits

Section III – Hazard Identification

Potential Acute Health Effects:	May cause irritation		
Eyes and Skin:	Mild irritation, especially in open wounds..		
Inhalation:	Exposure to high dust concentrations may cause irritation of mucous membranes.		
Ingestion:	A large body load may cause vomiting, diarrhea, cramps, tingling in hands and feet, weak pulse, and circulatory disturbances.		
Potential Chronic Health Effects:	Lung symptoms		
CARCINOGENICITY LISTS	**IARC Monograph:** No	**NTP:** No	**OSHA:** No

Section IV – First Aid Measures

Eyes:	Flush eyes with water, including under upper and lower lids, for at least 15 minutes. Get medical attention if pain and irritation persists.
Skin:	Wash thoroughly with water. Obtain medical advice if rash develops.
Ingestion:	Administer water if patient is conscious. Ingesting potash will usually cause purging of the stomach by vomiting. Obtain medical attention.
Inhalation:	Remove to fresh air. Obtain medial attention if discomfort persists.

Section V – Fire Fighting Measures

Flash Point:	Not Applicable	**Autoignition Temperature:**	Not Applicable
Lower Explosive Limit:	Not Applicable	**Upper Explosive Limit:**	Not Applicable
Unusual Fire and Explosion Hazards:	When subjected to extremely high temperatures, it may release small quantities of chlorine gas.		
Extinguishing Media:	As required for surrounding fire. Potash is non-flammable and does not support combustion.		
Special Firefighting Procedures and Equipment:	Wear full protective clothing and self-contained breathing apparatus.		

Section VI – Accidental Release Measures

Small Spill:	Sweep up and use as fertilizer if non-contaminated.
Large Spill:	Collect with appropriate equipment. If on a hard surface, sweep up residue with brooms. If on soil, remove and collect the top 5cm of soil.
Release Notes:	Non-toxic to aquatic organisms as defined by USEPA. If in the U.S., contact the US COAST GUARD NATIONAL RESPONSE CENTER toll free number 800-424-8802. In case of accident or road spill notify: CHEMTREC IN USA at 800-424-9300; CANUTEC in Canada at 613-996-6666 CHEMTREC in other countries at (International code)+1-703-527-3887.
Comments:	See Section XIII for disposal information and Section XV for regulatory requirements. Large and small spills may have a broad definition depending on the user's handling system. Therefore, the spill category must be defined at the point of release by technically qualified personnel.

Section VII – Handling and Storage

Ventilation:	Local exhaust to reduce dust concentrations below recommended levels.
Handling:	Avoid generating dust by excessive or unnecessary movement.
Storage:	Store in a dry location. Avoid contact with aluminum or carbon steel to minimize corrosion.

Section VIII – Exposure Controls/ Personal Protection

Engineering Controls:	May be necessary to minimize dust levels.
Personal Protection:	
Eye Protection:	Use tight-fitting safety goggles in areas of high dust concentration.
Protective Clothing:	Gloves, long sleeve shirts and long pants. Launder work clothing regularly.
Respiratory Protection:	Wear NIOSH approved respiratory protective equipment when workplace conditions warrant use of respirator.
Other Protective Clothing or Equipment:	Optional

Section IX – Physical and Chemical Properties

Appearance/Color/Odor:	White to red solid, fine to 4mm size, granules which may have a slight oily odor.	**Boiling Point:**	1500^{o}C (sublimates)
Melting Point/Range:	771-773^{o}C	**Boiling Point Range:**	1420-1500^{o}C
Solubility in Water:	347 g/L @ 20^{o}C	**Vapor Pressure (mmHg):**	Not Applicable
Specific Gravity:	2.0 (H_2O) = 1)	**Molecular Weight:**	74
Vapor Density:	Not Applicable	**% Volatiles:**	<0.5
Bulk Density:	1-1.3 g/ml	**Evaporation Rate:**	Not Applicable
pH:	about 7	**Freezing Point:**	Not Applicable
Viscosity:	Not Applicable	**Density:**	Not Applicable

Section X – Stability and Reactivity

Stability:	Stable
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	None
Materials to Avoid (Incompatibles):	Contact with strong acid may produce hydrogen chlorine gas; contact with hot nitric acid may product toxic nitrosyl chloride.
Hazardous Decomposition Products:	None

Section XI – Toxicological Information

Significant Routes of Exposure:	Skin, eyes, ingestion, inhalation	
Toxicity to Animals:	**Acute Oral Toxicity:**	(mouse, rat) LD_{50}=1500-2600 mg/kg bw.
	Acute Inhalation Toxicity:	No data available
	Acute Toxicity: Other Routes:	No data available
	Acute Dermal Toxicity:	No data available
	Repeated Dose Toxicity:	No data available
	Eye & Skin Irritation/Corrosion:	No data available
Special Remarks on Toxicity to Animals:	Based on toxicity data for another salt compound (I.e. potassium nitrate). Not expected to be toxic by dermal exposure as defined by OSHA.	
	Developmental Toxicity/Teratogenicity:	No data available
	Bacterial Genetic Toxicity In-Vitro: Gene Mutation:	(*Saccaromyces cerevisiae*) - Mitotic recombination: NOAEL = 300 mM.
	Non-Bacterial Genetic Toxicity In-Vitro: Chromosomal Aberration:	No data available.
	Toxicity to Reproduction:	No data available.
	Carcinogenicity:	No data available.
Other Effects on Humans:	Large doses by mouth can cause gastrointestinal irritation, purging, weakness and circulatory disturbances. Potassium chloride used as a dietary supplement in food for human consumption is generally recognized as safe (GRAS).	
Special Remarks on Chronic Effects on Humans	Not reported to be carcinogenic mutagenic, teratogenic or allergenic	
Special Remarks on Other Effects on Humans:	None	

Section XII – Ecological Information

Ecotoxicity:	**Acute Toxicity to Fish:**	(*Lepomis macrochirus*) (blue gill) – 96 hour - LC_{50} = 2010 mg/L (ppm KCl)
	Chronic Toxicity to Fish:	No data available
	Acute Toxicity to Aquatic Invertebrates:	(*Daphnia magna*) - 48 hours - EC_{50} = 337 – 825 mg/L; (*Physa heterostropha*) - 96 hrs - LC_{50} = 940 mg/L.
	Chronic Toxicity to Aquatic Invertebrates:	No data available
	Toxicity to Aquatic Plants:	((*Nitzschia linearis*)diatom) - 5 days- 120 hour TL_m = 1,337 ppm KCl; (*Scendesmus subspicatus*) 72 hour - EC_{50} = 2,500 mg/L. (*Chlorella vulgaris*) - 3 – 4 months - NOEC = 600 mg KCl/L, LOEL = 700 mg KCl/L.
	Toxicity to Bacteria: (activated sludge):	No data available
	Toxicity to Soil Dwelling Organisms:	No data available
	Toxicity to Terrestrial Plants:	No data available
Environmental Fate:	**Stability in Water:**	Ions can persist, dissociates in water
	Stability in Soil:	Binds to clay particles
	Transport and Distribution:	1.51×10^{-8} % to air; 45.2% to water; 54.7% to soil; 0.0755% to sediment
Toxicity:	Not toxic to aquatic organisms defined by USEPA	
Degradation Products:	**Biodegradation:**	No data available
	Photodegradation:	No data available

Section XIII – Disposal Considerations

Product Disposal:	Uncontaminated product may be used as fertilizer. Otherwise, dispose according to Federal State or Provincial regulations in a landfill approved to receive potash.
General Comments:	Because of its solubility, potash should not be disposed of in a location where run-off will escape.

Section XIV – Transportation Information

	USDOT	**TDG - Canada**
Proper Shipping Name:	Not Regulated	Not Regulated
Hazard Class:		
Identification Number:		
Packing Group (Technical Name):		
Labeling / Placarding:		
Authorized Packaging:		
Notes:		
European Transportation:		

Section XV – Regulatory Information

UNITED STATES: SARA Hazard Category:

This product has been reviewed according to the EPA Hazard Categories promulgated under Section 311 and 312 of the Superfund Amendment and reauthorization Act of 1986 (SARA title III) and is considered, under applicable definitions, to meet the following categories:

Fire:	No	**Pressure Generating:**	No	**Reactivity:**	No	**Acute:**	No	**Chronic:**	No

40 CFR Part 355 - Extremely Hazardous Substances: None

40 CFR Part 370 - Hazardous Chemical Reporting: None

All intentional ingredients listed on the TSCA inventory.

SARA Title III Information: This product contains the following substances subject of the reporting requirements of Title III (EPCRA) of the Superfund amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Chemical	**CAS NO.**	**Percent by Weight**	**CERCLA RQ (lbs)***	**SARA (1986) Reporting**		
				311	**312**	**313**
Potassium Chloride	7447-40-7	95-99.8	NA	No	No	No
Sodium Chloride	7647-14-5	0.1-4	NA	No	No	No

CERCLA/Superfund, 40 CFR Parts 117, 302: If this product contains components subject to substances designated as CERCLA reportable Quantity (RQ) Substances, it will be designated in the above table with the RQ value in pounds. If there is a release of RQ Substance to the environment, notification to the National Response Center, Washington D.C. (1-800-424-8802) is required.

CANADA:

WHMIS Hazard Symbol and Classification:	Not Controlled
Ingredient Disclosure List:	This product does not contain ingredient(s) on this list.
Environmental Protection:	All intentional ingredients are listed on the DSL (Domestic Substance List).

EINECS#: (Potassium Chloride) 231-211-8
(Sodium Chloride) 231-554-3

California: Prop 65: This product contains substances that are known to the State of California to cause cancer and/or reproductive harm

Section XVI – Other Information

NFPA Hazard Ratings:	**Health:** 1	**Flammability:** 0	**Instability:** 0	**Special Hazards:**
	0 = Insignificant	**1 = Slight**	**2 = Moderate**	**3 = High** **4 = Extreme**

COMMENTS:

Section(s) changed since last revision: II